STIC Search Report
EIC 2100

STIC Database Tracking Number: 157861

TO: Ellen Tran **Location: RND 2B35** **Art Unit : 2134** **Wednesday, June 29, 2005** **Case Serial Number: 09/905285**	**From: David Holloway** **Location: EIC 2100** **RND 4B19** **Phone: 2-3528** **david.holloway@uspto.gov**

Search Notes

Dear Examiner Tran,

Attached please find your search results for above-referenced case.
Please contact me if you have any questions or would like a re-focused search.

David

STIC EIC 2100 157861
Search Request Form

Today's Date: 29 JUN '05

What date would you like to use to limit the search?

Priority Date: 21 July 2000 Other:

Name ELLEN TRAN

AU 2134 Examiner # 80217

Room # 2B35 Phone 2-3842

Serial # 09/905,285

Format for Search Results (Circle One):

PAPER (DISK) EMAIL

Where have you searched so far?

(USP) DWPI (EPO) (JPO) ACM (IBM) TDB

IEEE INSPEC SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) (YES) NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at http://ptoweb/patents/stic/stic-tc2100.htm.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

- server recording/logging user's actions on a seperate CPU/processor/computer, into a task list or operation log.

- the user's actions coded instruction with fold parameters

Example server making a macro(s) for User A to type letter dial a specific phone #, or send a fax

STIC Searcher Holloway Phone 2-3528

Date picked up 6-29-05 Date Completed 6-29-05

sira Search and Information Resources Administration

```
Set     Items   Description
S1    1623004   LOG OR MONITOR?? OR HISTORY OR HISTORIES OR RECORD? OR TRA-
            CK? OR LOGS OR KEYLOGGER OR LOGGING
S2    1207320   ACTIVIT? OR USAGE? OR KEYSTROKE? OR ACTION? OR PROCESSES OR
             TASK OR TASKS OR CODED()INSTRUCTION? OR EVENT?
S3      35489   MACRO? ? OR EXECUTABL? OR (SOFTWARE? OR APPLICATION?)(2N)(-
            TOOL? OR MODULE?) OR SCRIPT?
S4    3082511   COUNT? OR FREQUEN? OR NUMBER? OR ENUMERAT? OR SUM OR SUMS -
           OR TOTAL?
S5      17799   (COMPUTER? OR MACHINE?)(N)(LEARN? OR TRAIN?) OR ARTIFICIAL-
            ()INTELLIGENC? OR AI OR NEURAL()(NET OR NETS OR NETWORK? OR S-
            YSTEM?) OR ANS
S6    3190735   USER? ? OR CLIENT? ? OR INDIVIDUAL? OR PERSONAL? OR NODE? -
           OR TERMINAL? OR WORKSTATION? OR MEMBER? ?
S7    3633257   LIMIT? OR BENCHMARK? OR LEVEL? OR MAXIMUM? OR MINIMUM? OR -
           THRESHOLD? OR MAX OR LEAST?
S8      27939   S1 AND S2 AND S6
S9       1529   S3(2N)(CREAT? OR WRIT? OR DEVELOP? OR ASSEMBL? OR DESIGN?)
S10        51   S3(5N)(REUS? OR RECALL? OR RECYCL? OR USE(N)(AGAIN? OR REP-
            EAT?))
S11         3   S5 AND S9
S12         0   S5 AND S10
S13         7   S7 AND S9 AND S8
S14        24   S8 AND S9
S15         7   S1 AND S10
S16         3   S9 AND S7 AND S1(2N)S2
S17        79   S10 OR S11 OR S13 OR S14 OR S15 OR S16
S18        52   S17 AND IC=G06F
S19        26   S18 NOT AD=20000721:20030721
S20        24   S19 NOT AD=20030721:20050701
S21        24   IDPAT (sorted in duplicate/non-duplicate order)
S22        23   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2005/Feb(Updated 050606)
        (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200540
        (c) 2005  Thomson Derwent
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22/5/16 (Item 16 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010590435 **Image available**
WPI Acc No: 1996-087388/199609
XRPX Acc No: N96-073327
Display screen event **monitoring appts. for computer-aided software development system - has interface program controlling communication between development system and screen-oriented application tool of which inputs and outputs are** monitored **to generate trigger when given** event **occurs**
Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: GOLDMAN J; JENINGS B T
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5485569	A	19960116	US 92963786	A	19921020	199609	B
			US 94238197	A	19940504		

Priority Applications (No Type Date): US 92963786 A 19921020; US 94238197 A 19940504
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5485569	A		19	G06F-017/50	Cont of application US 92963786

Abstract (Basic): US 5485569 A

The method for operating screen-oriented software application tool in a computer-aided software development system, which includes an electronic digital computer and computer software which comprises a **user** interface, an operating system, an interface program and one or more **software development tools** for performing predefined software development **tasks** . Communication between the **software development tools** and the screen-oriented application tool is controlled, and the application tool containing a representation of a display screen comprising a two-dimensional character array and a text output cursor. The tool is not designed for operation with a graphical **user** interface and has outputs consisting of printable text and special codes for controlling the display screen by positioning the text output cursor, writing characters to the 2D character array, and clearing characters from the character array.

The outputs of the application tool are **monitored** and used to detect the occurrence of a predefined application tool **event** in a predefined region of the display screen representation. The predefined application tool **event** comprises the text output cursor entering or exiting the predefined region. A trigger is generated on detecting the predefined application tool **event** within the predefined region, including the text output cursor entering or exiting the predefined region.

USE/ADVANTAGE - For design, development and testing of complex software.

Dwg.1/11

Title Terms: DISPLAY; SCREEN; **EVENT** ; **MONITOR** ; APPARATUS; COMPUTER; AID; SOFTWARE; DEVELOP; SYSTEM; INTERFACE; PROGRAM; CONTROL; COMMUNICATE; DEVELOP; SYSTEM; SCREEN; ORIENT; APPLY; TOOL; INPUT; OUTPUT; **MONITOR** ; GENERATE; TRIGGER; **EVENT** ; OCCUR
Index Terms/Additional Words: **CASEB _US-548 5569_US 5485**
Derwent Class: T01
International Patent Class (Main): **G06F-017/50**
File Segment: EPI

22/5/18 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010300817 **Image available**
WPI Acc No: 1995-202077/199527
XRPX Acc No: N95-158738
Imaging appts. used for engineering drawing - has control of separate and independent software in discrete modules , many of which may be reused in subsequent appts. to create new imaging apparatus
Patent Assignee: MINNESOTA MINING & MFG CO (MINN)
Inventor: SIEFFERT K J
Number of Countries: 006 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 656585	A2	19950607	EP 94118835	A	19941130	199527	B
JP 7200798	A	19950804	JP 94290974	A	19941125	199540	
US 5457778	A	19951010	US 93161749	A	19931202	199546	
EP 656585	A3	19950809	EP 94118835	A	19941130	199613	

Priority Applications (No Type Date): US 93161749 A 19931202
Cited Patents: No-SR.Pub; 2.Jnl.Ref; EP 322103; WO 9106052
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 656585	A2	E	27	G06F-009/44	
Designated States (Regional): DE FR GB IT					
JP 7200798	A		24	G06T-001/00	
US 5457778	A		24	G06F-015/00	
EP 656585	A3			G06F-009/44	

Abstract (Basic): EP 656585 A
The apparatus (10) has one-way downward communication with each of the following, the input media control unit (20), the image retrieval control unit (22), the image placement unit (24), the output media control unit (26) and the user interface unit (28).
There is no direct communication between the input media control unit, the image retrieval control unit and the image placement unit, and the output media control unit, and the user interface unit. Each of the foregoing five units are completely independent of each other.
ADVANTAGE - Significantly cuts development time and costs while providing flexibility for implementation of wide variety of imaging apparatuses.
Dwg.2/10
Title Terms: IMAGE; APPARATUS; ENGINEERING; DRAW; CONTROL; SEPARATE; INDEPENDENT; SOFTWARE; DISCRETE; MODULE; REUSE; SUBSEQUENT; APPARATUS; NEW; IMAGE; APPARATUS
Derwent Class: T01
International Patent Class (Main): **G06F-009/44** ; **G06F-015/00** ; G06T-001/00
File Segment: EPI

22/5/23 (Item 23 from file: 347)
DIALOG(R)File 347:JAPIO

05608334 **Image available**
DOCUMENT PROCESSOR

PUB. NO.: 09-223134 [JP 9223134 A]
PUBLISHED: August 26, 1997 (19970826)
INVENTOR(s): ARAI KYOICHI
APPLICANT(s): FUJI XEROX CO LTD [359761] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 08-032132 [JP 9632132]
FILED: February 20, 1996 (19960220)
INTL CLASS: [6] **G06F-017/21**
JAPIO CLASS: 45.4 (INFORMATION PROCESSING -- Computer Applications)
JAPIO KEYWORD:R139 (INFORMATION PROCESSING -- Word Processors)

ABSTRACT

PROBLEM TO BE SOLVED: To automatically extract a required macro-function matched with the characteristics of a document to be prepared or edited and to **reuse** the **macro** -function.

SOLUTION: A data storage part 6 manages registered macroinformation 6c as a sorting tree such as a purpose sort and a language sort based upon tree structure information 6a and node information 6b. When a document to be processed is inputted, a condition processing part 2 acquires a tree name and a node name corresponding to the attributes of the document, i.e., information stored in the data storage part 6 and specifies a node in the acquired tree through a tree structure retrieving part 3 and a node retrieving part 4 and a macro-retrieving part 5 extracts the registered macro-information 6c registered in the specified tree node. Display necessary for the generatiora/ deletion or registration/deletion of tree structure, a node, macro-information, etc., is processed and outputted by a display processing part 7

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Set     Items   Description
S1    1623004   LOG OR MONITOR?? OR HISTORY OR HISTORIES OR RECORD? OR TRA-
            CK? OR LOGS OR KEYLOGGER OR LOGGING
S2    1207320   ACTIVIT? OR USAGE? OR KEYSTROKE? OR ACTION? OR PROCESSES OR
             TASK OR TASKS OR CODED()INSTRUCTION? OR EVENT?
S3     612762   MACRO? ? OR EXECUTABL? OR TOOL? ? OR SCRIPT?
S4    3082511   COUNT? OR FREQUEN? OR NUMBER? OR ENUMERAT? OR SUM OR SUMS -
            OR TOTAL?
S5      17799   (COMPUTER? OR MACHINE?)(N)(LEARN? OR TRAIN?) OR ARTIFICIAL-
            ()INTELLIGENC? OR AI OR NEURAL()(NET OR NETS OR NETWORK? OR S-
            YSTEM?) OR ANS
S6    3190735   USER? ? OR CLIENT? ? OR INDIVIDUAL? OR PERSONAL? OR NODE? -
            OR TERMINAL? OR WORKSTATION? OR MEMBER? ?
S7    3633257   LIMIT? OR BENCHMARK? OR LEVEL? OR MAXIMUM? OR MINIMUM? OR -
            THRESHOLD? OR MAX OR LEAST?
S8      27939   S1 AND S2 AND S6
S9      14252   S3(2N)(CREAT? OR WRIT? OR DEVELOP? OR ASSEMBL? OR DESIGN?)
S10        65   S8 AND S9
S11         4   S1 AND S2 AND S3 AND S4 AND S5 AND S7
S12        64   S2(3N)S6 AND S9
S13         2   S4 AND S7 AND S12
S14         0   S12 AND S5
S15        10   S3 AND S5 AND S9
S16       126   S10:S15
S17        88   S16 AND IC=G06F
S18        57   S17 NOT AD=20000721:20030721
S19        51   S18 NOT AD=20030721:20050701
S20        51   IDPAT (sorted in duplicate/non-duplicate order)
S21        51   IDPAT (primary/non-duplicate records only)
File 347:JAPIO Nov 1976-2005/Feb(Updated 050606)
        (c) 2005 JPO & JAPIO
File 350:Derwent WPIX 1963-2005/UD,UM &UP=200540
        (c) 2005  Thomson Derwent
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21/5/18 (Item 18 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012520662 **Image available**
WPI Acc No: 1999-326768/199927
Related WPI Acc No: 1999-313047
XRPX Acc No: N99-245093

Software method for analyzing production data on computer

Patent Assignee: KLA TENCOR CORP (KLAT-N)
Inventor: HARDIKAR M; KULKARNI A; SHIFLETT R; ZHOU S

Number of Countries: 019 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9922311	A1	19990506	WO 98US22746	A	19981027	199927	B
EP 1025511	A1	20000809	EP 98955139	A	19981027	200039	
			WO 98US22746	A	19981027		
JP 2004513402	W	20040430	WO 98US22746	A	19981027	200430	
			JP 2000518337	A	19981027		

Priority Applications (No Type Date): US 97958780 A 19971027; US 97958288 A 19971027
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9922311	A1	E	40	G06F-017/00	
Designated States (National): JP					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
EP 1025511	A1	E		G06F-017/00	Based on patent WO 9922311
Designated States (Regional): DE FR GB					
JP 2004513402	W		63	G06T-011/20	Based on patent WO 9922311

Abstract (Basic): WO 9922311 A1

NOVELTY - A **user** (850) automatically generates reports of production data (860) on a regular basis to an output device e.g. a printer, or alert an operator by e-mail or paging.

DETAILED DESCRIPTION - A **user** (850) customizes the analytical tools by selecting production parameters from a dialogue box, and creates flow charts on the computer display representing the sequence of production variables and production functions previously selected (840). The software is set up with a macro program (840) **recording** function to remember the production **keystrokes** perviously selected. The analytical sequence represented by the flowchart (870) is automatically executed whenever it is selected by the **user** , or this sequence can be reprogrammed to run at specified intervals in the future (870). INDEPENDENT CLAIMS are included for; a software method for creating flexible flowcharts on a computer; a software system for analyzing production data; a software system for **creating executable** flowcharts on a computer; a software method for analyzing production data on a computer; a software system for analyzing production data on a computer.

USE - Creating analytical graphics including bar charts in object-oriented Windows (RTM) environment, e.g. analyzing production data in semiconductor quality control.

ADVANTAGE - Provides software package for building customized charts and flow diagrams with executable conditions.

DESCRIPTION OF DRAWING(S) - The drawing shows the operation of higher level software.

pp; 40 DwgNo 8/8

Title Terms: SOFTWARE; METHOD; PRODUCE; DATA; COMPUTER
Derwent Class: T01; T04; U11
International Patent Class (Main): **G06F-017/00** ; G06T-011/20
International Patent Class (Additional): **G06F-009/44** ; **G06F-017/18** ; **G06F-017/27** ; **G06F-017/30** ; **G06F-017/60** ; **G06F-019/00**
File Segment: EPI

N/J

21/5/33 (Item 33 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010058379 **Image available**
WPI Acc No: 1994-326090/199441
XRPX Acc No: N94-256135
Hierarchically grouped macro-instruction for graphical user **interface - uses macros and icons to show chronological execution of component operations below parent macro**
Patent Assignee: HEWLETT-PACKARD CO (HEWP)
Inventor: DEHART D L
Number of Countries: 003 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 621527	A1	19941026	EP 94302243	A	19940329	199441	B

Priority Applications (No Type Date): US 9348439 A 19930416
Cited Patents: 2.Jnl.Ref; WO 9106050
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 621527	A1	E	9	G06F-003/023	

Designated States (Regional): DE FR GB

Abstract (Basic): EP 621527 A
The **macro creation** method involves initiating (420) a **recording** function (230) and storing **user** -entered **keystrokes** ((531,533,535) into a data buffer, the key strokes being stored in a predetermined order. The **recording** function is then terminated (450). A **macro** is then **created** (430,440,450) using the stored **keystrokes** . The macro is displayed to the window in the predetermined order.
ADVANTAGE - Facilitates operator edit of macros.
Dwg.3/5
Title Terms: HIERARCHY; GROUP; MACRO; INSTRUCTION; GRAPHICAL; **USER** ; INTERFACE; SHOW; CHRONOLOGICAL; EXECUTE; COMPONENT; OPERATE; BELOW; PARENT; MACRO
Derwent Class: T01; T04
International Patent Class (Main): **G06F-003/023**
International Patent Class (Additional): **G06F-003/033** ; **G06F-009/44**
File Segment: EPI

No

21/5/34 (Item 34 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009925645 **Image available**
WPI Acc No: 1994-193356/199424
Related WPI Acc No: 1996-127994; 1998-446393
XRPX Acc No: N94-152204

Operation directing method for computer including application software - involves monitoring event **steps as abstract message with software directed accordingly with** event **hook for trapping selected** events

Patent Assignee: BORLAND INT INC (BORL-N)
Inventor: POTTS R J; VERSHEL M A
Number of Countries: 019 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 602790	A2	19940622	EP 93308682	A	19931029	199424	B
CA 2107499	A	19940503	CA 2107499	A	19931001	199429	
US 5432940	A	19950711	US 92970724	A	19921102	199533	
EP 602790	A3	19951108				199617	
US 5627958	A	19970506	US 92970724	A	19921102	199724	
			US 95407438	A	19950317		

Priority Applications (No Type Date): US 92970724 A 19921102; US 95407438 A 19950317
Cited Patents: No-SR.Pub; 6.Jnl.Ref; EP 352908; EP 566228; WO 9215934
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 602790	A2	E	43	G06F-009/46	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
US 5432940	A		63	G06F-009/06	
US 5627958	A		65	G06F-003/00	Div ex application US 92970724 Div ex patent US 5432940
CA 2107499	A			G06F-007/02	

Abstract (Basic): EP 602790 A

The method involves monitoring the **events** (350) and reporting desired ones of the **events** on an abstract message and then comparing the message with script directed instruction (330) and directing operation of the application software according to the script directed instructions. The steps are then repeated until operation of the application software is terminated.

At least one **event** hook is installed in the application software for trapping **events** . Selected ones of the trapped **events** are blocked from reaching the software. A callback function with the software is registered which receives messages including internal **events** of the software. The abstract message is a meta-message representing low level **events** .

ADVANTAGE - **Script writer** has complete control over behaviour and **actions** of target application. System includes help information continuum for providing on demand help for screen objects of interest.

Dwg.3/6B

Title Terms: OPERATE; DIRECT; METHOD; COMPUTER; APPLY; SOFTWARE; **MONITOR** ; **EVENT** ; STEP; ABSTRACT; MESSAGE; SOFTWARE; DIRECT; ACCORD; **EVENT** ; HOOK ; TRAP; SELECT; **EVENT**
Derwent Class: T01; W04
International Patent Class (Main): **G06F-003/00** ; **G06F-007/02** ; **G06F-009/06** ; **G06F-009/46**
File Segment: EPI

21/5/36 (Item 36 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009727909 **Image available**
WPI Acc No: 1994-007759/199401
XRPX Acc No: N94-006270
System development interactive support method - monitoring, recording , **invoking and suggesting past present and future** actions **automatically according to set of procedures**
Patent Assignee: TELEFONAKTIEBOLAGET ERICSSON L M (TELF)
Inventor: WENNMYR E
Number of Countries: 025 Number of Patents: 015
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9325960	A1	19931223	WO 93SE398	A	19930506	199401	B
AU 9343636	A	19940104	AU 9343636	A	19930506	199417	
FI 9405742	A	19941207	WO 93SE398	A	19930506	199510	
			FI 945742	A	19941207		
NO 9404717	A	19950118	WO 93SE398	A	19930506	199511	
			NO 944717	A	19941207		
CN 1079830	A	19931222	CN 93106166	A	19930520	199515	
EP 645032	A1	19950329	EP 93913696	A	19930506	199517	
			WO 93SE398	A	19930506		
US 5485615	A	19960116	US 92896659	A	19920610	199609	
AU 673528	B	19961114	AU 9343636	A	19930506	199702	
BR 9306516	A	19980915	BR 936516	A	19930506	199844	
			WO 93SE398	A	19930506		
EP 645032	B1	19991215	EP 93913696	A	19930506	200003	
			WO 93SE398	A	19930506		
DE 69327318	E	20000120	DE 93627318	A	19930506	200011	
			EP 93913696	A	19930506		
			WO 93SE398	A	19930506		
ES 2142343	T3	20000416	EP 93913696	A	19930506	200026	
MX 202264	B	20010608	MX 933341	A	19930603	200235	
KR 314262	B	20011228	WO 93SE398	A	19930506	200252	
			KR 94703324	A	19940926		
CN 1069424	C	20010808	CN 93106166	A	19930520	200504	

Priority Applications (No Type Date): US 92896659 A 19920610
Cited Patents: 01Jnl.Ref; EP 453371; JP 62262144; US 4734854; US 4827404; US 5101491; US 5133045; US 5187788
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9325960	A1		72	G06F-009/44	
Designated States (National): AU BR FI KR NO					
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
AU 9343636	A			G06F-009/44	Based on patent WO 9325960
FI 9405742	A			G06F-000/00	
NO 9404717	A			G06F-009/44	
CN 1079830	A			G06F-009/00	
EP 645032	A1	E	2	G06F-009/44	Based on patent WO 9325960
Designated States (Regional): CH DE DK ES FR GB GR IE IT LI NL SE					
US 5485615	A		44	G06F-015/40	
AU 673528	B			G06F-009/44	Previous Publ. patent AU 9343636 Based on patent WO 9325960
BR 9306516	A			G06F-009/44	Based on patent WO 9325960
EP 645032	B1	E		G06F-009/44	Based on patent WO 9325960
Designated States (Regional): CH DE DK ES FR GB GR IE IT LI NL SE					
DE 69327318	E			G06F-009/44	Based on patent EP 645032 Based on patent WO 9325960
ES 2142343	T3			G06F-009/44	Based on patent EP 645032
MX 202264	B			G11C-011/00	
KR 314262	B			G06F-009/44	Previous Publ. patent KR 95701102

Based on patent WO 9325960

CN 1069424 C G06F-009/00

Abstract (Basic): WO 9325960 A

The process description of the software being developed is instantiated by the system. A support system (8) provides the **user** with a series of choices relating to the software development. A menu of choices is generated, each constituting a suggestion regarding the **actions** relevant to the set of procedures.

The choices selected, in turn, permit a variety of system tools (22), each operating in parallel and concurrently, to be used in the development of the software. The system automatically **monitors** and checks the process during any manipulation and provides analysis as well as suggested courses of **action** to the **user** . The system has a logic interpreter with graphical interactive communication and an expert system.

USE/ADVANTAGE - For computer program design. Provides flexible support without requiring **user** to follow rigid development pattern.

Dwg.4/15

Title Terms: SYSTEM; DEVELOP; INTERACT; SUPPORT; METHOD; **MONITOR** ; **RECORD** ; INVOKE; PASS; PRESENT; FUTURE; **ACTION** ; AUTOMATIC; ACCORD; SET; PROCEDURE

Derwent Class: T01

International Patent Class (Main): **G06F-000/00** ; **G06F-009/00** ; **G06F-009/44** ; **G06F-015/40** ; G11C-011/00

International Patent Class (Additional): **G06F-015/20** ; **G06F-019/00**

File Segment: EPI

ND

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Set     Items   Description
S1    3578095   LOG OR MONITOR?? OR HISTORY OR HISTORIES OR RECORD? OR TRA-
            CK? OR LOGS OR KEYLOGGER OR LOGGING
S2    8488625   ACTIVIT? OR USAGE? OR KEYSTROKE? OR ACTION? OR PROCESSES OR
             TASK OR TASKS OR CODED()INSTRUCTION? OR EVENT?
S3     220195   MACRO? ? OR EXECUTABL? OR (SOFTWARE? OR APPLICATION?)(2N)(-
            TOOL? OR MODULE?) OR SCRIPT?
S4    9777185   COUNT? OR FREQUEN? OR NUMBER? OR ENUMERAT? OR SUM OR SUMS -
            OR TOTAL?
S5     833493   (COMPUTER? OR MACHINE?)(N)(LEARN? OR TRAIN?) OR ARTIFICIAL-
            ()INTELLIGENC? OR AI OR NEURAL()(NET OR NETS OR NETWORK? OR S-
            YSTEM?) OR ANS
S6    4199483   USER? ? OR CLIENT? ? OR INDIVIDUAL? OR PERSONAL? OR NODE? -
            OR TERMINAL? OR WORKSTATION? OR MEMBER? ?
S7    9697205   LIMIT? OR BENCHMARK? OR LEVEL? OR MAXIMUM? OR MINIMUM? OR -
            THRESHOLD? OR MAX OR LEAST?
S8     115042   S1 AND S2 AND S6
S9      28436   S3(2N)(CREAT? OR WRIT? OR DEVELOP? OR ASSEMBL? OR DESIGN?)
S10      1476   S3(5N)(REUS? OR RECALL? OR RECYCL? OR USE(N)(AGAIN? OR REP-
            EAT?))
S11       256   S8 AND S9
S12        10   S8 AND S10
S13       382   S9 AND S10
S14     89598   S1(3N)S2
S15        83   (S9 OR S10) AND S14
S16      1085   S5 AND (S9 OR S10)
S17         3   S16 AND S14
S18        46   (S9 OR S10) AND S5 AND S7 AND S4
S19        19   S15 AND S4
S20        72   S12 OR S17 OR S18 OR S19
S21        58   RD (unique items)
S22        40   S21 NOT PY>2000
File   8:Ei Compendex(R) 1970-2005/Jun W3
         (c) 2005 Elsevier Eng.  Info. Inc.
File  35:Dissertation Abs Online 1861-2005/Jun
         (c) 2005 ProQuest Info&Learning
File  65:Inside Conferences 1993-2005/Jun W4
         (c) 2005 BLDSC all rts. reserv.
File   2:INSPEC 1969-2005/Jun W3
         (c) 2005 Institution of Electrical Engineers
File  94:JICST-EPlus 1985-2005/May W2
         (c)2005 Japan Science and Tech Corp(JST)
File 111:TGG Natl.Newspaper Index(SM) 1979-2005/Jun 29
         (c) 2005 The Gale Group
File   6:NTIS 1964-2005/Jun W3
         (c) 2005 NTIS, Intl Cpyrght All Rights Res
File 144:Pascal 1973-2005/Jun W3
         (c) 2005 INIST/CNRS
File  34:SciSearch(R) Cited Ref Sci 1990-2005/Jun W4
         (c) 2005 Inst for Sci Info
File  99:Wilson Appl. Sci & Tech Abs 1983-2005/May
         (c) 2005 The HW Wilson Co.
File  95:TEME-Technology & Management 1989-2005/May W4
         (c) 2005 FIZ TECHNIK
```

NV

22/5/4 (Item 4 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

04143739 E.I. No: EIP94112412589
Title: Adding macros to Primavera (and other software): Functional and productivity improvements
Author: Aaron, A. Larry
Conference Title: Proceedings of the 38th Annual Meeting of AACE International
Conference Location: San Francisco, CA, USA Conference Date: 19940619-19940622
E.I. Conference No.: 21128
Source: Transactions of the American Association of Cost Engineers 1994. AACE, Morgantown, WV, USA. 5p CA.1
Publication Year: 1994
CODEN: AACTAZ ISSN: 0065-7158
Language: English
Document Type: CA; (Conference Article) Treatment: A; (Applications); G ; (General Review); M; (Management Aspects)
Journal Announcement: 9506W3
Abstract: Many popular DOS-based word processing and database management software packages have the built-in capability to **record** and playback **keystrokes** that are called macros. These mini-programs save time, reduce errors, and add convenience and functionality to everyday applications. Unfortunately, these are rarely available in common scheduling, estimating, accounting, and other project management/project controls software applications. However, such project management software can be enhanced with special macro applications that run ?behind the scenes' (memory-resident) of the foreground project control application. These **macros** can be **developed** by **Total** Cost Management professionals who have a good knowledge of computer programming and a thorough knowledge of the application that they are enhancing. This paper: Discusses how macro-enhancement capability can be added to almost any text-based software running in DOS, including programs that already have built-in macro capability; highlights specific new features that the author developed for Primavera/Finest Hour and the potential for other developments; encourages those familiar with programming techniques to develop such applications; and discusses the advantages and disadvantages of utilizing behind-the-scenes (memory resident) macro software as a software applications enhancement tool. (Author abstract)
Descriptors: *Project management; Scheduling; Macros; Database systems; Computer operating systems; Computer systems programming; Word processing; Productivity
Identifiers: Software package Primavera/Finest Hour; Macro enhancement; Memory resident
Classification Codes:
912.2 (Management); 913.1 (Production Engineering); 723.1 (Computer Programming); 723.3 (Database Systems); 722.4 (Digital Computers & Systems); 723.2 (Data Processing)
912 (Industrial Engineering & Management); 913 (Production Planning & Control); 723 (Computer Software); 722 (Computer Hardware)
91 (ENGINEERING MANAGEMENT); 72 (COMPUTERS & DATA PROCESSING)

22/5/6 (Item 6 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

NO

03011922 E.I. Monthly No: EIM9101-001922
Title: Taxonomy of uses of interaction history .
Author: Lee, Alison
Corporate Source: Univ of Toronto, Toronto, Ont, Can
Conference Title: Proceedings - Graphics Interface '90
Conference Location: Halifax, NS, USA Conference Date: 19900514
E.I. Conference No.: 13592
Source: Proceedings - Graphics Interface. Publ by Canadian Information Processing Soc, Toronto, Ont, Can. p 113-122
Publication Year: 1990
CODEN: PGINEK ISSN: 0713-5424
Language: English
Document Type: PA; (Conference Paper) Treatment: A; (Applications); L; (Literature Review/Bibliography)
Journal Announcement: 9101
Abstract: A variety of tools have been proposed to enhance and support **user** -computer interactions. One such tool is the interaction **history** facility. It permits the **user** to have access to past interactions kept in a **history** and to incorporate them into the context of the current situation. We characterize different ways the **history** can aid in the performance of a **user** 's **tasks** . The list of possible aids include: **history** for **reuse** , **history** for **recording** & replaying a **script** , **history** for **user** recovery, **history** for navigation, **history** for external memory support, **history** for adaptive interfaces, and **history** for **user** modeling. We conclude with a discussion of some of the issues and problems that this taxonomy has helped to raise. (Author abstract) 61 Refs.
Descriptors: *COMPUTER GRAPHICS--*Interactive; COMPUTER INTERFACES
Identifiers: **USER** -COMPUTER INTERACTION
Classification Codes:
723 (Computer Software)
72 (COMPUTERS & DATA PROCESSING)

22/5/12 (Item 4 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01292998 ORDER NO: AAD93-15848
LEARNING ABSTRACT AND MACRO OPERATORS IN AI PLANNING (ABSTRACT OPERATORS)
Author: YANG, HUA
Degree: PH.D.
Year: 1992
Corporate Source/Institution: VANDERBILT UNIVERSITY (0242)
Director: DOUGLAS H. FISHER
Source: VOLUME 54/01-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 342. 214 PAGES
Descriptors: COMPUTER SCIENCE; **ARTIFICIAL INTELLIGENCE**
Descriptor Codes: 0984; 0800

Planning is one of the essential elements of intelligent behavior. It arranges actions in advance to insure their appropriate use during performance. **AI** planning is an automated process of reasoning about actions. Deliberation about how to proceed can help find effective solutions more efficiently. This capability is useful in a wide range of practical problems with significant commercial potential, such as production scheduling, communication route planning, robotics, and automated program generation. In addition, **AI** planning is also studied for a better understanding of human planning and problem solving. Various **AI** planning models provide some insights that can suggest principles of human cognitive processes.

This dissertation is concerned with one aspect of planning--problem solving, which has been studied since the early days of **AI** planning research. Many planning models have been built to improve problem-solving effectiveness and efficiency. There are basically two routes to overall improvement--through an improved planning engine and through an improved knowledge base. Our approach primarily seeks improvement of the planning knowledge base. In effect, it improves the planning engine as well.

AI planning may in the worst case require exponential time in the **number** of possible actions and goals to complete a plan. Abstraction is a mechanism that can make planning more efficient. Abstraction reorganizes a planning knowledge base so that planning can be done at different **levels** of abstraction to avoid unnecessary details, thus reducing the planning cost. We employ a method called conceptual clustering to organize and abstract planning actions (namely operators). Conceptual clustering is an inductive learning method which categorizes action descriptions and characterizes those categories. It constructs a classification hierarchy, with actions as the leaves and abstract categories as the internal nodes. The hierarchy is utilized to improve planning efficiency by helping a planner's decision making during problem solving.

It is generally recognized that learning from problem-solving experience is another effective way of improving performance. For instance, successful solutions can be remembered as **macro** operators and **reused** later to save the cost of reconstructing them. Macro operators are composite operators, which take 'large' steps towards a solution. But it is of equal importance that they should be properly applied to fully realize potential benefit. The hierarchy formed by conceptual clustering not only improves a planner's decision procedure, but also presents a unique opportunity to exploit macro operators more effectively and leads to improved planning machinery.

In summary, our system PLOT incorporates planning, learning and conceptual clustering techniques. It can solve a given planning problem and learn from the experience. Moreover, its internal abstraction hierarchy formed by conceptual clustering supports reuse of problem-solving knowledge and thus, can improve performance significantly.

01130133 ORDER NO: AAD90-32000

AN APPROACH TOWARD A GENERALIZED COMMAND LANGUAGE (COMMAND LANGUAGE, SOFTWARE)

Author: TAI, HERMANN C.
Degree: PH.D.
Year: 1990
Corporate Source/Institution: NORTHWESTERN UNIVERSITY (0163)
Adviser: LAWRENCE HENSCHEN
Source: VOLUME 51/06-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 2997. 104 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984

As the cost of hardware components continues to decrease and the complexity of the software systems increase, the modification and maintenance of software systems become more difficult than ever due to the inaccurate way of **recording** the interconnection information and overall system structure. In order to reduce the expenses for the software and keep the reliability of most software systems, a new Generalized Command Language (GCL) is developed in this research to increase the portability of most software and the **reusability** of well-developed **software modules** . The ultimate intention of this research is to give both the designers and maintainers a tool to design large-scale software system without having to worry about its portability. Since the software programmer only has to know the abstract part of system design not those irrelevant details they don't have to understand about various operating systems, productivity can be greatly increased. In this research, command languages of the DEC VMS, BSD Unix, and MS DOS operating systems are investigated due to the extensive demands of those systems. After the full development of this Generalized Command Language (GCL), the capability of modularized software systems can be enhanced. Quality and reusability of software systems can thus be assessed. The cost encountered in software transferability and maintainability can therefore be reduced significantly.

The major contributions of this dissertation include: (1) theory, grammar rules and the **action** rules for the GCL, (2) a prototype GCL that allows **users** to move their software across operating systems, (3) implementation of partial GCL to form an intelligent support system for less-experienced **users** , and (4) applicability of the Generalized Command Language (GCL) to the software reusability.

01102882 ORDER NO: AAD90-11854

AUTOMATED CUSTOMIZATION OF USER INTERFACES

Author: LERNER, BARBARA STAUDT

Degree: PH.D.
Year: 1989
Corporate Source/Institution: CARNEGIE-MELLON UNIVERSITY (0041)
Source: VOLUME 50/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL. PAGE 5737. 202 PAGES
Descriptors: COMPUTER SCIENCE
Descriptor Codes: 0984

With the prevalence of personal and small business computers, there is a proliferation of **software** houses **developing tools** for the general computing community. In such situations, it is not possible for a user interface designer to design tools for a specific user community. This thesis addresses this problem by investigating mechanisms that allow user interfaces to be constructed so that they can customize themselves automatically to match the styles and habits of individual users.

The proposed mechanisms use knowledge of the application domain, context in which the user is operating, as well as knowledge of the user's habits and idiosyncrasies to perform their customizations. Customizations involve automation of routine task, interpretation of deviant input, and provision of active help. While domain and context knowledge are generally encoded directly in the underlying system, user knowledge is acquired by observing the user's interactions with the system. These interactions are analyzed to find patterns in the user's behavior which can be automated.

In addition to automating the customization process itself, the thesis also investigates the use of automated evaluation mechanisms, called success/failure criteria. When an action is automatically performed, success/failure criteria are used to **monitor** subsequent user **actions** to determine if the automated actin was acceptable to the user, or if the user undid the action. The results of this evaluation are used as feedback to the customization process. In this way, the complete customization process can be done without direct user intervention. This includes identifying situations where customization is appropriate, determining what action to take, and deciding if the action was correct.

The mechanisms proposed in the thesis were implemented in a Gandalf programming environment. The major results of experimentation are that automated customization resulted in a 7% decrease in the **number** of commands required to complete a task, and up to 25% reduction in the **number** of errors encountered. In addition the success/failure criteria performed well, correctly evaluating 95% of the automated actions.

22/5/18 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC

4873929 INSPEC Abstract Number: C9503-0220-013
Title: HIT: a hybrid intelligent training system for knowledge engineers
Author(s): Arcand, J.-F.; Champagne, L.; Dalkir, K.
Author Affiliation: Canadian Autom. Res. Centre, Laval, Que., Canada
p.661-7
Publisher: IAKE, Gaithersburg, MD, USA
Publication Date: 1992 Country of Publication: USA 821 pp.
ISBN: 0 938801 06 6
Conference Title: Proceedings of IAKE '92: Symposium on New Generation Knowledge Engineering
Conference Date: 16-19 Nov. 1992 Conference Location: Washington, DC, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: The article describes the design and **development** of a **software tool** that allows the psychological and mathematical analysis of student knowledge engineers' learning styles. The HIT system contains laboratory or project work elements that can be used in **artificial intelligence** courses, both in academic settings and in on-the-job or apprenticeship training contexts. The aim of this system is not to computerize textbooks on **artificial intelligence** but to provide **artificial intelligence** -based software to supplement existing course materials. The software provides a training environment that has a **number** of the characteristics commonly found in intelligent tutoring systems (or, as they are increasingly being referred to, in intelligent learning environments). HIT is intended to be a pedagogical complement rather than any form of replacement as the tool enriches human teachers and tutors rather than automating the entire process. HIT is designed as a general environment, analogous to expert system shells, to teach and to precisely diagnose any cognitive difficulties individuals may have in learning the material. The software provides a course authoring tool, a motor for processing courses and students' progress through the courses, a **neural network** that maintains a permanent **record** of facts and **actions** (e.g. keystroke data) for each individual learner, a **neural network** editor to modify or create new networks and a **number** of mathematical and statistical analysis tools which are useful for the subsequent analysis of these data. In short, HIT is a research laboratory into cognitive aspects of learning that helps in both data capture and data analysis. The HIT system enables the efficient and continual training of one or more individuals in the area of knowledge engineering, more specifically in knowledge acquisition tasks. Eventually, this can be further acted upon in order to adjust the training (content, sequence, pace, etc.) to each individual learner based on their aptitudes, preferences and learning goals. This article will focus primarily on the mathematical and psychological instruments used by HIT to analyse the learning styles of knowledge engineers in training. Potential applications of this tool will also be briefly addressed, as well as how they can be implemented in educational and training contexts. (8 Refs)
Subfile: C
Descriptors: authoring systems; computer based training; computer science education; educational courses; intelligent tutoring systems; knowledge acquisition; knowledge engineering; **neural nets** ; psychology; statistical analysis
Identifiers: hybrid intelligent training system; knowledge engineers; HIT ; software tool; mathematical analysis; psychological analysis; student knowledge engineers' learning styles; project work elements; laboratory work elements; **artificial intelligence** courses; academic settings; apprenticeship training contexts; on-the-job training contexts; **artificial intelligence** -based software; course materials; intelligent tutoring systems; pedagogical complement; cognitive difficulties; course authoring tool; processing courses; student progress; **neural network**

Class Codes: C0220 (Computing education and training); C7810C (Computer-aided instruction); C6115 (Programming support); C6170T (Knowledge engineering tools); C6170K (Knowledge engineering techniques); C1140 (Probability and statistics); C5290 (Neural computing techniques); C1230D (Neural nets)

22/5/25 (Item 4 from file: 6)
DIALOG(R)File 6:NTIS

1816825 NTIS Accession Number: AD-A280 594/3
Searching for Plans Using a Hierarchy of Learned Macros **and Selective** Reuse
(Doctoral thesis)
Dyer, D. E.
Air Force Inst. of Tech., Wright-Patterson AFB, OH. School of Engineering.
Corp. Source Codes: 000805002; 012225
Report No.: AFIT/DS/ENG/94J-01
Jun 94 117p
Languages: English Document Type: Thesis
Journal Announcement: GRAI9419
Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.
NTIS Prices: PC A06/MF A02
Country of Publication: United States
This research presents a new approach to improving the performance of a **macro** planner: selective **reuse** . In **macro** planning, **reuse** can result in poorer performance than when planning with only primitive operators, a phenomenon that has been called the utility problem. The utility problem arises because the benefits of reuse are outweighed by the cost of retrieving a **macro** to **reuse** and the cost of searching through the larger search space caused by considering reuse candidates. Selective reuse contains the expansion of the search space by **limiting** the **number** of reuse candidates considered and **limits** the search required by considering only those reuse candidates that entail no additional work. Previously, performance improvement in a macro planner has been possible only by selective learning. Unlike selective learning, selective reuse never overlooks a learning opportunity that might have value in future problem solving. This research developed a polynomial-order retrieval method which reduces the cost of retrieving a reuse candidate likely to save search. A macro planner (HINGE) was implemented to explore selective reuse. To improve the probability of beneficial reuse. HINGE searches in a space of plans using a hierarchically-structured search method that provides multiple opportunities for reuse.
Descriptors: ***Artificia** l **intelligence** ; Planning; Learning; Problem solving; Computer programs; Selection; Information retrieval; Hierarchies; Theses
Identifiers: *Macroprogramming; *Software reuse; HINGE Computer program; Block stacking problem; NTISDODXA
Section Headings: 62B (Computers, Control, and Information Theory--Computer Software); 62GE (Computers, Control, and Information Theory--General)

22/5/29 (Item 2 from file: 144)
DIALOG(R)File 144:Pascal

13884268 PASCAL No.: 99-0063296
MSCMAC neural network **learning model in structural engineering**
HUNG S L; JAN J C
Dept. of Civ. Engrg., Nat. Chiao Tung Univ., 1001 Ta Hsueh Rd., Hsinchu 300, Taiwan
Journal: Journal of computing in civil engineering, 1999, 13 (1) 1-11
ISSN: 0887-3801 CODEN: JCCEE5 Availability: INIST-572X; 354000073215090010
No. of Refs.: 25 ref.
Document Type: P (Serial) ; A (Analytic)
Country of Publication: United States
Language: English
The present American Institute of Steel Construction specifications use the alignment charts and approximate formulas conveniently to determine some coefficients in design, such as moment gradient coefficient C SUB b for beams of I-shaped section and effective length factor K of columns. In these methods, the coefficients are unconservative when the boundary conditions are different from the development of specifications. The governing equations, numerical approaches, on the K and C SUB b coefficients provide more accurate results. The approaches, however, are not readily available for structural engineers to use in design. Applying **neural network** computing toward structural engineering problems has received increasing interest, with particular emphasis placed on supervised **neural networks** . The cerebellar model articulation controller (CMAC), one of the supervised **neural network** learning models, is mostly used in the domain of control. In this work, we use a newly **developed Macro** Structure CMAC (MSCMAC) **neural network** learning model to aid steel structure design. The topology of the novel learning model is constructed by a **number** of time inversion CMACs as a tree structure. The learning performance of the MSCMAC is first compared with a stand-alone time inversion CMAC using one structural engineering example. That comparison indicates not only superior prediction but also fast learning propriety for the MSCMAC **neural network** learning model. In addition, the MSCMAC **neural network** learning model is applied to two steel design problems. It is shown that the MSCMAC not only can learn structural design problems within a reasonable central processing unit time but also can estimate more accurate coefficients than that estimated through alignment charts and approximate formulas in American Institute of Steel Construction specifications.

English Descriptors: Metallic structure; Structural design; Numerical simulation; **Neural network** ; Learning algorithm; Structural analysis; Beam column structure; Boundary condition; Specification; Method study; Time inversion; Topology; Comparative study; Application; Moment problem

French Descriptors: Construction metallique; Calcul construction; Simulation numerique; Reseau neuronal; Algorithme apprentissage; Analyse structurale; Structure poutre poteau; Condition aux **limites** ; Specification; Etude methode; Inversion temps; Topologie; Etude comparative; Application; Probleme moment

Classification Codes: 001D14C03; 001D14H02C; 001D14C02; 295

```
Set     Items   Description
S1    3278339   LOG OR MONITOR?? OR HISTORY OR HISTORIES OR RECORD? OR TRA-
            CK? OR LOGS OR KEYLOGGER OR LOGGING
S2    4452843   ACTIVIT? OR USAGE? OR KEYSTROKE? OR ACTION? OR PROCESSES OR
             TASK OR TASKS OR CODED()INSTRUCTION? OR EVENT?
S3     364506   MACRO? ? OR EXECUTABL? OR (SOFTWARE? OR APPLICATION?)(2N)(-
            TOOL? OR MODULE?) OR SCRIPT?
S4    6263088   COUNT? OR FREQUEN? OR NUMBER? OR ENUMERAT? OR SUM OR SUMS -
            OR TOTAL?
S5      74550   (COMPUTER? OR MACHINE?)(N)(LEARN? OR TRAIN?) OR ARTIFICIAL-
            ()INTELLIGENC? OR AI OR NEURAL()(NET OR NETS OR NETWORK? OR S-
            YSTEM?) OR ANS
S6    5683669   USER? ? OR CLIENT? ? OR INDIVIDUAL? OR PERSONAL? OR NODE? -
            OR TERMINAL? OR WORKSTATION? OR MEMBER? ?
S7      12943   S1(3N)S6(3N)S2
S8        454   S3(5N)S5
S9          0   S7(S)S8
S10         2   S7 AND S8
S11     28764   S3(2N)(CREAT? OR WRIT? OR AUTHOR OR ASSEMBL?)
S12       489   S7 AND S11
S13        23   S8 AND S11
S14       103   S4(S)S12
S15       128   S10 OR S13 OR S14
S16       109   RD (unique items)
S17       100   S16 NOT PY>2000
S18        99   S17 AND S11
S19        99   S18 NOT PD=20010721:20040721
S20        99   S19 NOT PD=20040721:20050701
S21        75   S7(5N)S11
S22         9   S20 AND S21
S23        34   S13 OR S22 OR S10
S24        33   RD (unique items)
S25        31   S24 NOT PY>2000
S26        31   S25 NOT PD>20010721
File 647:CMP  Computer Fulltext 1988-2005/Jun W2
         (c) 2005 CMP Media, LLC
File 674:Computer News Fulltext 1989-2005/Jun W4
         (c) 2005 IDG Communications
File 275:Gale Group Computer DB(TM) 1983-2005/Jun 29
         (c) 2005 The Gale Group
File 148:Gale Group Trade & Industry DB 1976-2005/Jun 29
         (c)2005 The Gale Group
File   9:Business & Industry(R) Jul/1994-2005/Jun 28
         (c) 2005  The Gale Group
File  13:BAMP 2005/Jun W3
         (c) 2005  The Gale Group
```

26/3,K/1 (Item 1 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

01103124 CMP ACCESSION NUMBER: CRN19960916S0148
Reseller's Reseller Uses Benchmarks To Learn The Truth (Reseller Profile)
Deborah A. Cozeolino
COMPUTER RESELLER NEWS, 1996, n 701, PG143
PUBLICATION DATE: 960916
JOURNAL CODE: CRN LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: CRN Test Center - Product Reviews & Channel-Support Programs
WORD COUNT: 740

... be using, but it also tests how specific applications will run on the hardware. RTE **records users ' keystrokes** and automatically **writes scripts** that are later played back to simulate a natural work environment. RTE utilizes variables such as **number** of users, typing speeds, operator pause time and the combination of different applications being used concurrently.

RTE **scripts** are **written** specially for each customer. However, they are time-consuming and costly. Nelson has developed standard...

26/3,K/3 (Item 3 from file: 647)
DIALOG(R)File 647:CMP Computer Fulltext

00549547 CMP ACCESSION NUMBER: WIN19930401S7912
In Search of a Good Macro Recorder (Power Windows)
Karen Kenworthy
WINDOWS MAGAZINE, 1993, n 404 , 319
PUBLICATION DATE: 930401
JOURNAL CODE: WIN LANGUAGE: English
RECORD TYPE: Fulltext
SECTION HEADING: HOW TO
WORD COUNT: 2149

... actions as before. To illustrate how Recorder works, I'm going to describe how to **create** a simple **macro** that prints a file. Let's assume the file is loaded into your favorite word...

...application macro languages are usually limited to the application itself.

So we're going to **write** a **macro** that makes a particular menu selection from our word processor's menus (Print under File...

...opening files, printing or selecting fonts and colors. Using the Any Application setting, a single **macro** can be **written** that works across a variety of applications.

There are also two speed settings: Fast and...another whose shortcut key is Shift+Tab. Thanks to this property, it's possible to **create** a third **macro** that simply invokes the other two.

Just record a third macro that consists of the...

...macros, be careful you don't create an unintentional loop. Situations where macro A calls **macro** B that calls **macro** **AI** will run forever (or until you press Ctrl+Break).

By the way, this Enable Shortcut...record several macros and store them in the same file. You can also merge two **macro** files, **creating** a single file with all the macros previously in only one file or the other ...

26/3,K/7 (Item 4 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)

01713452 SUPPLIER NUMBER: 16261873 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Testing the GUI. (automated testing of GUI-based applications and software tools for performing the tests) (Cover Story) (Tutorial)
Marsh, Vivien
DBMS, v7, n12, p52(6)
Nov, 1994
DOCUMENT TYPE: Tutorial ISSN: 1041-5173 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 2909 LINE COUNT: 00258

... Inexperienced end users may use an application differently than well-seasoned users, and enter a **totally** different set of events to the application. Therefore, you win probably have to **create** multiple **scripts** with varying user-input patterns.

Synchronization is a problem for test scripts in general; the ... develop an application, the testing tool should also be visual. Testers should be able to **create scripts** with the same development ease. It's no good having to code C-like script...

...automated testing tool for Microsoft Windows environments. (See Figure 1, page 57.) It focuses on **recording user actions** to **create** test **scripts** for subsequent playback. Testpro features four major components: an object-oriented recorder that captures user controls and objects, regardless of actual window placement. A full editor is available for **creating** or enhancing **scripts** , complete with toolbar and other standard features such as cut and paste. Note that scripts...

...supports testing of Unix-based applications. Window Runner supports object-oriented recording of Windows events, **script creation** , and **script** replay to test applications. (See Figure 3.) Testers can use a combination of recorded and scripted instructions. Scripts can be coded in a C-like **script creation** language called Test Script Language, or by pointing-and-clicking on screen objects, whose functions...